

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on June 27, 2003, and the references cited therewith.

Claims 15, 19, and 29 are amended; as a result, claims 1-27 and 29-39 are now pending in this application.

Specification Objections

The Examiner objected to amendments filed on September 3, 2002 and May 29, 2003 under 35. U.S.C. 132 because it "introduces new matter into the disclosure".

Applicant has amended the specification to overcome the Examiner's objections. The amendments reverse previous amendments that resulted in the objections. No new matter has been added by way of these amendments.

Claim Objections

The Examiner objected to claims 15, 19, and 29 because of informalities.

It is believed that the proposed amendments to claims 15, 19, and 29 obviate the objections. No new matter has been introduced by way of these amendments.

§102 Rejection of the Claims

Claims 1, 2, 7, 9-17, 20, and 22-26 were rejected under 35 USC § 102(b) as being anticipated by Wood et al. (U.S. Patent No. 5,675,149, hereinafter Wood et al.) and incorporated by reference Wood (U.S. Patent No. 5,420,419, hereinafter Wood).

Applicant respectfully traverses the rejection of claims 1, 2, 7, 9-17, 20, and 22-26 at least because the references do not teach or suggest the use of two bias pulses in a time frame as claimed, as well as further elements referencing the use of two or more bias pulses.

Wood in FIG. 6 and in col. 6, lines 18-26 describes applying a single bias pulse to each microbolometer in each frame time. Further, Wood in claim 19, lines 22-24 describes sweeping the receiving units (i.e., microbolometers in the array) with a single pulse (i.e., a 5 microsecond bias pulse) of short duration, in relation to the time required to sweep said array (i.e., 80,000 pixel array). Using a 5 microsecond bias pulse per microbolometer in an 80,000 pixel array and

addressing 14 pixels at a time in the array results in a frame time of approximately about 1/30th of a second, which is about a typical frame time required to scan an infrared image. In contrast, independent claim 14 recites "to apply two or more bias pulses substantially sequentially to each microbolometer in the array during a frame time". Claim 1 contains a similar recitation. Wood does not teach applying two or more bias pulses substantially sequentially to each microbolometer in the array during a frame time. In contrast, Wood describes applying a single, 5 microsecond, bias pulse to each microbolometer in an, 80,000 microbolometer, array.

Wood et al. in col. 5, lines 17-23 and lines 53-55 describe scan times (i.e., frame time) of not more than 1 second. In addition, Wood et al. in col. 5, lines 40-47 describe scanning using a moveable board and then measuring signals from individual pixels and do not describe applying two or more bias pulses to each of the microbolometers as recited in independent claims 1 and 14. Further, Wood et al. in col. 5, lines 47-53 describe performing multiple scans of any desired region of a scene and do not describe application of two or more bias pulses substantially sequentially to each microbolometer in the array in each frame time (i.e., each scan) as recited in independent claims 1 and 14. Furthermore, Wood et al. in col.5, lines 47-53 describe averaging of the signals obtained in multiple scans of any desired region of the scene and do not describe measuring the two or more signals associated with each of the applied two or more bias pulses during a frame time as recited in independent claims 1 and 14.

Claims 2, 7, 9-13, 15, 20, and 22-26, which are dependent from independent claims 1 and 14, respectively, should therefore also be found to be allowable, and such action is respectfully requested.

§103 Rejection of the Claims

Claims 3-5 were rejected under 35 USC § 103(a) as being unpatentable over Wood et al. and incorporated by reference Wood in view of Applicant Admitted Prior Art.

Claim 6 was rejected under 35 USC § 103(a) as being unpatentable over Wood et al. and incorporated by reference Wood in view of Applicant Admitted Prior Art as applied to claim 5 above, and further in view of Thiede et al. (U.S. Patent No. 5,129,595).

Claims 8, 21, 27, 29, and 33-39 were rejected under 35 USC § 103(a) as being unpatentable over Wood et al. and incorporated by reference Wood in view of Duvall, III (U.S. Patent No. 5,258,619).

Claims 18 and 19 were rejected under 35 USC § 103(a) as being unpatentable over Wood et al. and incorporated by reference Wood in view of Thiede et al.

Claims 30-32 were rejected under 35 USC § 103(a) as being unpatentable over Wood et al. and incorporated by reference Wood in view of Duvall, III as applied to claim 29 above, and further in view of Thiede et al.

Applicant respectfully traverses the rejection of claims 3-6, 8, 18-19, 21, 27, and 29-39 as follows:

Independent claims 1, 14, and 27 are respectfully asserted to distinguish over Wood et al. and Wood for the reasons presented above. Further, claims 3-6, 8, 18-19, 21, and 29-39 are respectfully asserted to distinguish over Wood et al., Wood, Duvall, and Thiede references. None of these references discloses applying two or more bias pulses substantially simultaneously to each microbolometer in the array during a frame time, as recited in independent claims 1, 14, and 27. Moreover, Applicant considers additional elements and limitations of claims 1, 14, and 27 to further distinguish over the cited references, and Applicant reserves the right to present arguments to this effect at a later date.

Applicant respectfully asserts that the Wood et al., Wood, Duvall, and Thiede references fail to teach or suggest all of the elements of Applicant's invention, such as applying two or more bias pulses substantially sequentially to each microbolometer in the array during a frame time.

For the reasons presented above, independent claim 27 and claims 3-6, 8, 18-19, 21, and 29-39, which depend directly or indirectly from independent claims 1 and 14, respectively, should therefore be found allowable, and such action is respectfully requested.

CONCLUSION

Applicant respectfully submits that the claims 1-27 and 29-39 are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney Kash Nama at (603) 888-2352 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743

Respectfully submitted,

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Date September 29, 2003

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 29 day of September, 2003.

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Name

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Signature